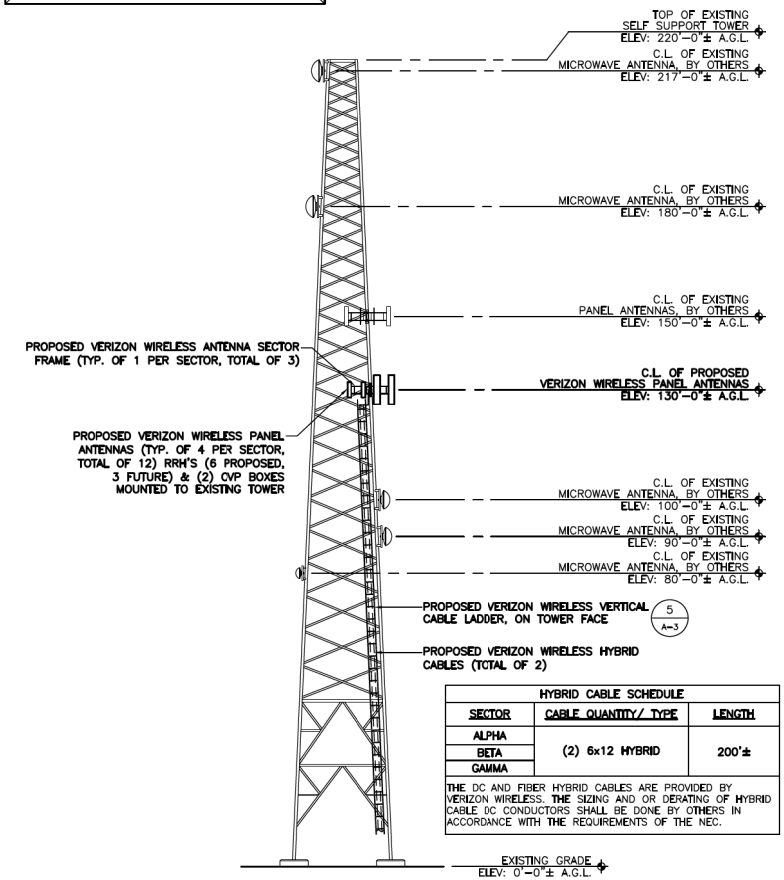
NOTE:
PROJECT OWNER IS RESPONSIBLE FOR PROVIDING A STRUCTURAL STABILITY ANALYSIS TO DETERMINE CAPACITY AND SUITABILITY OF THE EXISTING ANTENNA SUPPORT STRUCTURE AND/OR TOWER STRUCTURE TO SAFELY CARRY ALL ADDITIONAL LOADS IMPOSED BY THE PROPOSED EQUIPMENT AS SHOWN HEREIN. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INCORPORATING ANY REQUIRED STRUCTURAL MODIFICATIONS INTO THEIR SCOPE OF WORK.

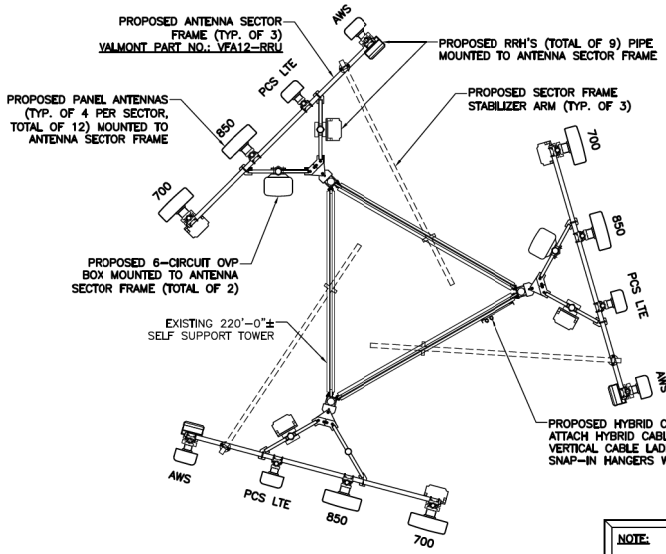
ON EXISTING ANTENNA SUPPORT STRUCTURES WITH FAA OBSTRUCTION MARKINGS: PAINT ANTENNAS, MOUNTING HARDWARE, AND EXPOSED VERTICAL CABLE RUNS TO MATCH EXISTING BACKGROUND COLOR PATTERN OF AVIATION ORANGE OR WHITE.



HYBRID CABLE SCHEDULE		
SECTOR	CABLE QUANTITY/ TYPE	LENGTH
ALPHA	(2) 6x12 HYBRID	200'±
BETA		
GAMMA		
THE DC AND FIBER HYBRID CABLES ARE PROVIDED BY VERIZON WIRELESS. THE SIZING AND OR DERATING OF HYBRID CABLE DC CONDUCTORS SHALL BE DONE BY OTHERS IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC.		

1 TOWER ELEVATION
SCALE: 1/16" = 1'-0"

GRAPHIC SCALE: 1/8"=1'-0"



APPRCX. NORTH

2 ANTENNA PLAN
SCALE: 3/8" = 1'-0"

GRAPHIC SCALE: 3/8"=1'-0"

NOTE:
1. REFER TO LATEST RFDS FOR FINAL ANTENNA CONFIGURATION.
2. ALL PROPOSED EQUIPMENT TO BE INSTALLED IN ACCORDANCE TO THE MANUFACTURER'S SPECIFICATIONS.

STRUCTURAL STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFIRM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION" FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 "STRUCTURAL STEEL", UNLESS OTHERWISE NOTED.
3. STEEL TUBING SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B.
4. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRAD B, OR ASTM A53 "PIPE STEEL, BLACK AND HOT DIPPED, ZINC-COATED WELDED AND SEAMLESS", TYPE E OR S, GRADE B. PIPE SIZE INDICATED ARE NOMINAL ACTUAL ARE OUTSIDE DIAMETER IF LARGER.
5. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE MI., OR EQUAL STRUT MEMBERS SHALL BE 1 5/8" X 1 5/8" X 12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.
6. FIELD CONNECTIONS SHALL BE BOLTED UNLESS OTHERWISE INDICATED. ALL BOLTS FOR STRUCTURAL CONNECTIONS SHALL BE HIGH STRENGTH BOLTS AND CONFORM TO THE LATEST EDITION OF ASTM A325 "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS, AND PLAIN HARDENED WASHERS". BOLTS SHALL BE 3/4 INCH DIA. UNLESS OTHERWISE NOTED.
7. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATIONS FF-S-325, GROUP II, TYPE 4, CLASS 1, HILTI KWIK BOLT II, OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE (4) INCHES.
8. SLEEVE ANCHORS SHALL CONFORM TO FEDERAL SPECIFICATIONS FF-S-325, GROUP II, TYPE 3, CLASS 3, AS MANUFACTURED BY HILTI FASTENING SYSTEMS OR APPROVED EQUAL. INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MINIMUM EMBEDMENT SHALL BE THREE (3) INCHES.
9. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF 1/2" DIAMETER STAINLESS STEEL ANCHORS ROD WITH NUTS & WASHERS, AN INTERNAL THREADED INSERT, A SCREEN TUBE, AND AN EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE HTE HILTI HIT HY-20 SYSTEM OR ENGINEER APPROVED EQUAL WITH 6" MIN. EMBEDMENT.
10. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
11. SUBMIT SHOP DETAIL DRAWINGS OF ALL STRUCTURAL AND MISCELLANEOJS STEEL TO THE ENGINEER FOR APPROVAL, AND INCORPORATE ALL COMMENTS PRIOR TO FABRICATION.
12. CONNECTIONS DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
13. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO TAKING CORRECTIVE ACTION, ANY SUCH ACTION SHALL REQUIRE PRIOR ENGINEER APPROVAL.
14. ALL WORK SHALL BE INSPECTED BY THE ENGINEER DURING AND AT THE COMPLETION OF CONSTRUCTION.

WELDING:

1. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE, AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES"
2. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WHERE FILLET WELD SIZES ARE NOT SHOWN. PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATINGS SHALL BE REPAIRED.

GALVANIZING:

1. ALL STEEL MATERIALS EXPOSED TO WEATHER SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED. ALL BOLTS, ANCHORS, AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
2. DAMAGE GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZED IN ACCORDANCE WITH ASTM A780, UNLESS OTHERWISE NOTED.

ANTENNA MOUNTING NOTES:

1. DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFIRM TO ANSI/TIA/EIA-222-G "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES". NOTE: SEE CODE FOR COUNTY SPECIFIC DESIGN WIND SPEEDS.
2. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
3. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-CAOTING (HOT DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
4. DAMAGE GALVANIZE SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
5. ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH DOUBLE NUTS AND SHALL BE INSTALLED SNUG TIGHT.
6. DESIGN RESPONSIBILITY OF ANTENNA MOUNTING BRACKETS, SUPPORTS AND ALL COMPONENTS THEREOF AND ATTACHMENT THERETO SHALL BE THE RESPONSIBILITY OF THE MANUFACTURER. MFR SHALL PROVIDE THE OWNER DRAWINGS DETAILING ALL COMPONENTS OF THE ASSEMBLY, INCLUDING CONNECTIONS, DESIGN LOADS, AND ALL OTHER PERTINENT DATA. MFR SHALL ALSO PROVIDE THE OWNER WITH A STATEMENT OF COMPLIANCE INDICATING THAT THE ANTENNA SUPPORTS HAVE BEEN DESIGNED IN ACCORDANCE WITH TIA/EIA-222-G STANDARDS. ALL SUBMISSIONS SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE THE WORK IS BEING PERFORMED.

STANDARD ANTENNA COLOR CODE NOTES:

1. VERIZON WILL COLOR CODE AND TAG THE COAX AT BOTH THE TOP OF THE TOWER AND INSIDE THE CELL SITE BUILDING AT THE CABLE ENTRY PART. THE MARKING SYSTEM WILL COMPRISE OF COLOR TAPE WITH A MINIMUM WIDTH OF 3/4 INCHES, 7 MIL VINYL PLASTIC TAPE, SCOTCH 35 OR EQUIVALENT.
2. THE TAGGING WILL BE DONE WITH METAL "DOG" TAGS. A TAG WILL BE PLACED ON THE COAX AT THE ANTENNA AND ON THE COAX IN THE CELL SITE BUILDING. THE TAG WILL IDENTIFY THE ANTENNA NUMBER AND FUNCTION; TX, RX ETC.
3. THE ENTRY PORT ASSIGNMENT SHOULD BE FOLLOWED WHERE POSSIBLE. THIS STANDARD ASSUMES THAT THE ENTRY PORT CONSISTS OF THREE ROWS OF FOUR PORTS. WITH THE FIRST ROW BEING NUMBERED FROM 1-6 FROM LEFT TO RIGHT. THE SECOND ROW IS NUMBERED 7-12 (LEFT TO RIGHT) AND THE THIRD ROW IS 13-18 (LEFT TO RIGHT).
4. A SITE SPECIFIC COAX COLOR SHEET TO BE PROVIDED BY CELLULAR EQUIPMENT ENGINEER.

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STATE OF MAINE
RONALD J. JACKSON
3773
LICENSED
PROFESSIONAL ENGINEER

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DRAWING SCALES ARE INTENDED FOR 24"x36" SIZE PRINTED MEDIA ONLY. ALL OTHER PRINTED SIZES ARE DEEMED "NOT TO SCALE".

SUBMITTALS

REV	DATE	DESCRIPTION	BY
A	09/28/15	FOR REVIEW	JM
B	03/09/16	REVISED EQUIPMENT	JM

SITE INFO:
SITE NAME:
PORTLAND_10_ME
LOCATION CODE:
381332
SITE ADDRESS:
81 NORTHPORT DRIVE
PORTLAND, ME 04103
CUMBERLAND COUNTY

SHEET TITLE:
ELEVATION, ANTENNA PLAN & NOTES

NEXIUS PROJ. NO: VZ11509
CHECKED BY: KB
CHECKED BY DATE: 03/09/16
SHEET NUMBER: A-2